

Learn the symptoms of heat stress; you could save a life

Although the temperatures have moderated since the beginning of August, summer is not over yet and we may still experience some hot weather. During the high-temperature days, those of you who work outside or in hot environments might suffer some heat-related illnesses or discomfort brought about by heat stress.

Heat stress occurs when the body's core temperature gets too high for the body to cool off quickly enough. The body's two major sources of heat loss are sweating and shifting more blood circulation from the body core to the skin. Sweat must evaporate, not just drip, for cooling to take place. Environmental conditions such as high relative humidity and low air movement can result in excessive sweating that doesn't provide cooling. Additional factors that can make an individual more susceptible to heat stress are poor physical condition, heart disease, diabetes and excess weight.

Preventing heat stress is a matter of controlling the six factors that cause it:

- Temperature
- Humidity
- Air movement
- Radiant temperature of surroundings
- Clothing
- Physical activity.

Heat stress injuries, ranging in severity from non-serious physical discomfort to life-threatening situations, are described below. It is important for us to recognize heat-stress symptoms, especially when the victims of the more serious conditions may become disoriented and unaware of the severity of their own condition.

Heat rash

This bumpy, itchy red rash is caused by a hot, humid environment and plugged sweat glands. Heat rash is annoying but not life-threatening. Dry clothes that help sweat evaporate will reduce the chance of heat rash. Washing regularly and keeping the skin clean and dry will help prevent it.

Heat cramps

Heat cramps often occur in the legs and abdomen when a person is sweating heavily and replacing water but not salt. The skin is hot and moist, and the pulse is normal. Moving into the shade and loosening clothing can help relieve heat cramps. Drinking lightly salted fluids can also help. Seek medical help if the cramps persist. Keep the victim sitting or lying down.

Heat exhaustion

Heat exhaustion occurs when the body's heat control system is overtaxed, and the core body temperature is increasing. Symptoms of heat exhaustion include heavy sweating; intense thirst; cool and moist skin; weak and fast pulse; and feelings of fatigue, weakness or dizziness. Get the victim to a cooler shaded area. Loosen clothing, and begin cooling the victim quickly — by fanning and pouring cool water on him or her. Have the victim drink water, salted if available.

Heat stroke

Heat stroke is a life-threatening condition that requires immediate medical attention. Heat stroke occurs when the body rapidly uses up its supplies of water and salt. Sweating stops and the body, including the brain, begins to overheat rapidly and body temperature climbs to fatal levels. Symptoms include hot, dry, flushed skin, rapid pulse, difficulty breathing, headache, confusion, weakness and nausea. Heat stroke can rapidly progress to seizure and convulsions, unconsciousness and loss of pulse.

Call an ambulance immediately, and begin cooling the victim as quickly as possible. Spray or sponge him or her with cool water or immerse the victim in cool water. Do not give liquids to an unconscious person. ♦

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Think safety

When the heat is on, it may be harder to work safely. Not only can excessive heat make you sick; it can also make you short-tempered, inattentive, dizzy and slow — all of which are threats to working safely. Sweat can make your hands slippery and run into your eyes or eyewear and obscure your vision.

In the work place, the following controls and practices can be implemented to reduce the possibility of heat stress and help employees work safely:

- Use insulation and reflective barriers to control the heat source.
- Exhaust hot air or steam away from the work area.
- Use air-conditioning.
- Use air-conditioned rest areas.
- Use fans to circulate the air.
- Reduce the physical demands of the work by using mechanical equipment.
- Increase the frequency and duration of rest breaks.
- Schedule tasks to avoid heavy physical activity during the hottest parts of the day.
- Provide cool drinking water or an electrolyte-replacement drink and encourage its consumption.
- Use additional workers for the job or slow down the pace of the work.
- Make sure everyone understands the signs and symptoms of heat stress. ♦

Drink water, dress and eat lightly, stay cool

Here are some tips for avoiding heat stress:

- Follow work and rest routines that keep you from becoming exhausted in the heat.
- Alternate heavy work with lighter work, or move from a hot location to a cooler one periodically. Take advantage of scheduled breaks to rest and cool off.
- Drink water frequently. One of the main causes of heat stress is dehydration, so keep up your intake of water or fluid replacement drinks. Don't wait until you are thirsty to drink.
- Avoid beverages containing alcohol or caffeine; they actually deplete the body of fluids.
- Eat regular, light meals. Save the hot dinner until after work, and have something cool such as salad for lunch. If you are sweating a lot, lightly salt your foods to replace salt. But if you are on a salt-restricted diet, seek medical advice before adding salt to foods to prevent heat stress. Salt tablets are not recommended.
- Take time to get accustomed to the temperature, and slow down when moving from a cool area to a hot one, such as leaving an air-conditioned workplace and stepping out into the late afternoon heat and into a hot car. Use the ventilation to cool down the car.
- Dress in loose, comfortable clothing made of light fabrics and in light colors. Layer your clothing so you can add or take off items of clothing as the temperature changes. ♦